cystoscope and the examining finger in the rectum.[2] Any encroachment of the fibrous prostate into the bladder neck can be seen through the cystoscope. Obstructions of this type are treated by operation with the use of the Young punch. The bladder neck is punched out either directly through the urethra by means of illumination through the instrument, or else with the aid of a suprapubic opening, which enables the operator to perform the operation with the guidance of the palpating finger in the bladder.

Bladder neck contracture sometimes follows prostatectomy, necessitating a later operation to relieve the condition. This complication can, to a large degree, be eliminated by the use of the punch at the time of the enucleation of the prostate, the bladder neck being punched out posteriorly.[2]

In giving the results of the punch operation, Young reports a cure in 67 per cent of his series, and a marked improvement in an additional 11 per cent.

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Ophthalmology

Treatment of Strabismus—The treatment of strabismus, or crossed eyes,[3] should begin as soon as the condition is discovered, not only for the purpose of correcting the cosmetic defect, but to save the vision of the crossing eye. If one eye in a child is allowed to remain crossed until that child is over 6 years of age, the chances are that the eye will never have normal vision even though treatment is instituted after that age.

An "amblyopia ex anopsia," or loss of vision through disuse, develops and remains through life. The eye of an infant must be used to develop its maximum visual acuity, and when an eye crosses, it is not used, because if it were the child would see double.

Another reason for correcting the defect early is to try to re-establish binocular vision. Fusion of the two pictures from the eyes in the brain is a faculty which is developed in most of us during infancy, but this faculty cannot be developed when the eyes are crossed.

When the visual acuity of the crossing eye has been improved by refraction and the wearing of the proper glass over that eye, and by making the child exercise the bad eye by covering the good one, the time is ripe for the development of binocular vision. Stereoscopic exercises are used with the amblyoscope and the simple stereoscope. If the eyes do not straighten with the development of stereoscopic vision, we must resort to surgical procedures to keep permanently the ground that we have now gained.

The preferable surgical procedure is to advance or shorten the weaker muscle. If this will not correct the whole defect, the stronger muscle may be receded or partially cut. A free tenotomy is not desirable. Operation is practically always successful if the parents will permit the surgeon to do a second, or even third, operative correction if the first one did not remove the entire defect. Frequently not enough is done at the first operation, as the surgeon fears an overcorrection of the squint, but the adjustment can almost always be made perfect by a subsequent operation.

The writer believes with those who hold that if these patients could be treated while under 3 years of age, we would have a very high percentage of functional as well as cosmetic restoration of these patients who have a strabismus.

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2. Parker, Wilbur B.: Bladder Neck Obstructions, Their Surgical Relief in Reference to the Young Punch, Surgery, Gyn. and Ob., 1923, pp. 36-43.

3. Weyman, M. F.: California and Western Medicine March, 1926.

Obstetrics and Gynecology

Diet in Pregnancy—Although pregnancy is a normal bodily function and should not be regarded as a malady, it is certainly attended with many risks, and there is such a small border line between its physiology and pathology that the utmost care is necessary. Every pregnant patient should come under prenatal advice.

Diet in pregnancy is a matter of some importance. J. A. Polak[1] considers the following types of toxemia: hyperemesis, the preeclampsia toxemia, and eclampsia. Pernicious vomiting is evidently a serious complication, having a mortality rate of 20 per cent. Diet principles may impress the patient, and are advisable. Etiology or prognosis of the toxemia of the later months of pregnancy is not helped much by blood chemistry or metabolic rate findings. Herrick at Sloane Hospital has every toxemia of the later months of pregnancy studied by internists and biochemists.

In hyperemesis the dehydration and toxicity can be combated with copious ingestion of water in the form of alkaline waters. The carbohydrate deficiency can be cared for through increased intake of carbohydrates, fruit juices, cereals, custards, and some candy. Intravenous glucose alone, or in combination with insulin is occasionally a help. Some of these patients have defective emunctories or unbalance of the endocrine system.

DeLee in Chicago Lying-In Hospital at one time prescribed, without effect, salt-free diet for preeclamptics. Absolute milk diet did not stop the disease. Now he prescribes a salt poor, and a diet low in proteins and fat. Free use of water.

Sansum and Nuzum at Santa Barbara have done some excellent work in nutrition and food requirements. They find that vegetables, some nuts and fruits with the exception of prunes, plums and cranberries, give an alkaline ash causing increased alkalinity of the urine.

In our preclinic work at the College of Medical Evangelists we advise free use of fruits and fresh vegetables, avoiding strongly flavored vegetables, such as onions. We find the h-ion in urine goes up, and blood pressure comes down. The addition

1. American Medical Association Journal, June 24, 1926.

of cereals or meats may cause a change in the reaction of urine, and an increase in blood pressure.

Recently we had a good illustration of the prune as an acid ash. A mother brought a baby in with urine showing a strong ammonia odor and acid reaction. An erythema around genitalia and inside of thighs. Stopping the prunes, giving milk and vegetable broths, cleared up the difficulty.

Preeclamptic patients coming under treatment respond to basic diet and use of magnesium sulphate 20 cc. of a 10 per cent solution, given intravenously.

Patients long in labor and almost in starvation acidosis are given orange juices. In 1921 Blatherwick and Long [2] found it impossible to give sufficient orange juice to overstep the power of the body to utilize these organic acids.

Expectant mothers need also to be well fed, for the sake of the unborn. They should have foods rich in inorganic constituents. The new-born infant weighing six pounds contains more than an ounce of lime, all of which must be stored up during gestation. Dr. William P. Lucas discussing an article by Dr. H. W. Chappell,[3] "Early Rachitic Changes in the Femur and Tibia," says:

"While diet and hygiene are important factors in the production and cure of rickets, I am of the opinion that the diet of the mother during pregnancy and lactation is equally important in determining the susceptibility of an individual. Statistics show that the average American dietary is low in minerals, especially calcium. This is particularly true of the poorer classes in large cities who cannot afford sufficient quantities of the mineral-rich foods, such as fresh fruit, green vegetables, and milk. In the light of our experimental observations which agree well with clinical experience, we dare to believe that when the dietaries of expectant mothers are planned to include liberal quantities of inorganic constituents in their proper proportions, a long step will have been taken toward the eradication of this disease which has baffled the medical profession for so many generations. If this theory is proven true, rickets of the future will be the responsibility of the obstetrician rather than the pediatrician."

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Dermatology and Syphilology

Bismuth Salt Therapy in Syphilis—Experimental work on bismuth salts in treatment of syphilis is now sufficiently complete to serve as a trustworthy guide in treatment. Aside from the value of bismuth as a therapeutic agent, the question of dosage, frequency of administration, length of courses and frequency of courses is important.

Conclusions from early studies on absorption [1] [2] of bismuth injected intramuscularly, based on the persistence of the x-ray shadow at the site of the injection, were contradictory. The shadow sometimes disappeared when the bismuth could be demonstrated miscroscopically and chemically at the site of injection, and it sometimes persisted (due to calcium soap [3] from the oil suspension medium) after no bismuth could be demonstrated. It is interesting that some of the soluble salts are absorbed less readily than insoluble ones, due to focal necrosis [3] at the site of injection, from the union of soluble bismuth with tissue albumin. Chemical analysis of the tissue [3] carrying the site of injection demonstrated that 67 per cent of bismuth salicylate was absorbed in eight days and 95 per cent in twenty-one days. Bismuth salicylate is apparently the most rapidly absorbed of the insoluble salts.

The distribution of bismuth throughout the body has been determined by chemical analysis of the various tissues at different periods after injection of various bismuth salts.[4] Bismuth penetrates every tissue and organ of the body, including brain and bone. Fifty per cent can be recovered from the various tissues of the body 189 days after a single injection. About 40 per cent can be recovered from the urine and feces during this time, which contains a variable amount during the entire period of study (189 days). About 95 per cent of the total amount injected can be accounted for at the end of 189 days.

Previous studies on the therapeutic efficiency of various bismuth salts in experimental syphilis indicate the salicylate to be as good as any of the insoluble salts.[3] The dosage should be in exact relation to the body weight; 0.12 gram or 2 grains per 130 pounds being apparently the best for weekly injections.

The effect of bismuth alone and in combination with the arsenobenzenes, on the Wassermann reaction has been studied by Wright [5] in a series of 128 cases. Eighty per cent were still Wassermann positive after one course of neoarsphenamine and mercury salicylate, and of this number 52 per cent became negative after fifteen weekly intramuscular injections of bismuth of 0.1 gram each. Of the 20 per cent that were negative after the neoarsphenamine course none again reverted to positive after having been given bismuth. "Given in early syphilis its spirochaeticidal activity is but little less than that of the arsenobenzenes, and yet it does not provoke the severe reactions that are not uncommon following the initial dose of an arsenobenzene."

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2. A. M. A. Bio. Chem., 1922, liii, 103.

3. California and Western Medicine, December, 1925.

1. Cole, H. N., Farmer, H. L., and Miskdjion, H.: Intramuscular absorption of Some Insoluble Bismuth Compounds as Revealed by the Roentgen Rays, Arch. Dermat. and Syph., 1926, xiii, 219.

2. Beinhauer, L. G., and Jacob, E. M.: The Relative Absorption and Therapeutic Efficiency of Some Bismuth Preparations, Am. Jour. Syph., 1925, ix, 213.

3. Gruzheit, O. M.: Bismuth Salicylate in Experimental Rabbit Syphilis, Arch. Dermat. and Syph., 1926, xiii, 195.

4. Gruzheit, O. M.: Bismuth Absorption, Distribution, and Elimination, Am. Jour. Syph., 1927, xi, 103.

5. Wright, Carrol S.: The Effect of Bismuth Alone and in Combination with the Arsenobenzenes on the Wassermann Reaction, Am. Jour. Med. Science, 1927, clxiii, 2, 232.